

STATE OF SOUTH DAKOTA  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
HIGH PERFORMANCE CONCRETE BRIDGE DECK

IM 029-3(82)84, PCEMS 3785  
MINNEHAHA COUNTY

SEPTEMBER 17, 1999

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The following specified revisions shall be made to Section 460 of the South Dakota Department of Transportation Standard Specifications for Roads and Bridges.

Change the following in Section 460.2.

**J. Fly Ash:** See the Special Provision for Fly Ash.

Add the following to Section 460.3A.

Concrete for the High Performance Concrete Bridge Deck shall conform to Class A45. Class F fly ash conforming to the Special Provision for Fly Ash is required to be used. The amount of cement that is to be replaced by the Class F fly ash shall be 10%. The ratio of substitution of fly ash to cement shall be 1.9:1, by weight. The mix design shall be volumetrically adjusted to accommodate the additional fly ash such that the water/cementitious ratio of the mix design remains the same.

Add the following to Section 460.3N.

High Performance Bridge Decks shall be cured as follows:

As soon as the bridge deck concrete has been struck off and finished by the finish machine, it shall be given a carpet drag finish with the carpet drag attached to the finish machine. Immediately after the bridge deck has been tined, linseed oil base emulsion curing compound shall be uniformly applied at the specified rate. Wet burlap shall be placed as soon as the concrete surface will support it without deformation. The burlap shall be kept continuously and thoroughly wet with soaker hoses for not less than seven days after placing the concrete. Polyethylene sheeting shall

be placed over the wet burlap and soaker hoses as soon as the concrete can be walked on without damaging it.

Add the following to Section 460.4.

METHOD OF MEASUREMENT: The high performance concrete bridge deck will be measured with neat line dimensions computed to the nearest 0.1 cubic yard.

Add the following to Section 460.5.

BASIS OF PAYMENT: The high performance concrete bridge deck will be paid for at the contract price per cubic yard. Payment will be full compensation for all labor, equipment, tools, materials, and other items required to furnish, place, finish and cure the High Performance Concrete.

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## **11. HPC SPECIFICATIONS (Cont.)**

Special provisions were not provided for the girders.